Federal Support for Streetcars: Frequently Asked Questions

Updated April 3, 2014

Congressional Research Service
https://crsreports.congress.gov
R43464

CRS REPORT
Prepared for Members and
Committees of Congress

Summary

Streetcars, a type of rail public transportation, are experiencing a revival in the United States. Also known as trolleys, streetcars were widespread in the early decades of the 20th century, but almost extinct by the 1960s. Several new streetcar systems have been built over the past 20 years, and many more are being planned. In early 2014, there were 12 operating streetcar systems, 7 new systems under construction, and approximately 21 new systems in the planning stages. Many streetcars systems, though not all, have been built or are being built with the support of federal funds.

This report answers some frequently asked questions about streetcars and federal involvement in their construction and operation. It concludes by laying out policy options for Congress in dealing with streetcars.

Contents

Figures

Tables

Contacts

What Is a Streetcar?

A streetcar is a type of light rail public transportation that operates mostly in mixed traffic on rail lines embedded in streets and highways. Streetcar service is typically provided by single cars with electric power delivered by overhead wires known as catenaries, although streetcars can also draw power from underground cables or from batteries. Compared with non-streetcar light rail, streetcar lines tend to be shorter and the stops more frequent. Because of the short distance between stops and the overall operating environment, streetcars are slow compared with non-streetcar light rail and other types of rail public transportation, such as commuter rail and heavy rail.[1]

Streetcar systems can be categorized into four different types:[2]

1. legacy systems, lines that have been in operation for many years, but are the remnants of more extensive past systems (e.g., New Orleans);
2. heritage systems, new or revived systems using historical equipment (e.g., Memphis);
3. replica systems, new or revived systems using equipment built to replicate historical systems, but sometimes with modern amenities such as air conditioning (e.g., Tampa);
4. modern systems, new systems using modern equipment (e.g., Portland, OR).

How Many Streetcar Systems Exist in the United States?

In early 2014, there were 12 operating streetcar systems, 7 new systems under construction, and approximately 21 new systems in the planning stages (**Figure 1**).[3] Not included in these figures are several short streetcar lines associated with museums (e.g., Issaquah, WA) or primarily oriented to tourists (e.g., San Pedro, CA). Additionally, a few systems already in operation have extensions in construction or being planned. Because they are often controversial, streetcar systems that are being planned may not be built. The streetcars systems with the largest ridership include those in Philadelphia; New Orleans; San Francisco; Portland, OR; Tacoma; Memphis; and Seattle.

[1] See Federal Transit Administration, *National Transit Database: Glossary, 2013 Reporting Year*, Washington, DC, September 2013, http://www.ntdprogram.gov/ntdprogram/Glossaries/pdf/Glossary2013.pdf; and American Public Transportation Association, Public Transportation Fact Book 2013, Washington, DC, p. 62, http://www.apta.com/resources/statistics/Documents/FactBook/2013-APTA-Fact-Book.pdf.

[2] Reconnecting America, Midsize Cities on the Move: A Look at the Next Generation of Rapid Bus, Bus Rapid Transit, and Streetcar Projects in the United States, December 2012, p. 19, http://www.reconnectingamerica.org/assets/Uploads/20121206midsizefinal.pdf.

[3] CRS estimate based on Community Streetcar Coalition, 2013 Streetcar Coalition Summit, http://www.streetcarcoalition.org/pdf/2013_Summit_Book_Print.pdf; and American Public Transportation Association, APTA Streetcar and Heritage Trolley Site, http://www.heritagetrolley.org/index.html.

Figure 1. Existing and Possible Future Streetcar Systems in the United States, 2014

Source: CRS, based on Community Streetcar Coalition, *2013 Streetcar Coalition Summit*, http://www.streetcarcoalition.org/pdf/2013_Summit_Book_Print.pdf; and American Public Transportation Association, APTA Streetcar and Heritage Trolley website, http://www.heritagetrolley.org/index.html.

Notes: There are no streetcars operating, in construction, or being planned in Alaska, Hawaii, or Puerto Rico. Streetcars that primarily serve museum visitors or tourists on a limited or seasonal basis are excluded. In Lowell, MA, the National Park Service currently operates streetcars on a seasonal basis to serve visitors to the Lowell National Historical Park. Planning is under way to significantly extend this system to make it a general purpose public transportation system.

Do Streetcars Increase Transit Ridership?

Streetcars are intended to provide high-quality transit service for traveling short distances in urban environments. As part of this service, streetcars can link to other transportation modes as part of the "last mile" of a trip, as in Salt Lake City, where a new streetcar line links to light rail and bus lines.

Streetcars are often promoted as a means of increasing transit ridership by offering a better quality of service than buses, including such things as frequency of service, predictability of trip time, passenger capacity, and comfort. Additionally, streetcars can more easily accommodate wheelchairs and bicycles. Service quality, however, is not better in all cases: streetcars can be delayed by problems that would not affect buses, such as fallen catenaries or vehicles double-parked on the tracks. Greater capacity in modern streetcars may in part come at the expense of seating. Overall, there is no clear evidence as to whether streetcars attract new riders to transit.

Do Streetcars Promote Economic Development?

In some circumstances, streetcars can help attract and focus development by providing a more permanent transportation investment than buses and by promoting a walkable environment. For example, the greater permanence of a streetcar may improve the coherence of the urban environment, and may reduce the risk for developers of offices, residences, and retail, spurring job creation. The proximity of a streetcar may also reduce some costs that would otherwise confront private developers, such as the need for a large numbers of parking spaces.[4] According to one study, the area within a quarter-mile of the Little Rock streetcar system, opened in 2004, has had a capital investment of $800 million in new businesses, residences, and other activities between 2000 and 2012.[5] In addition, during construction, streetcars tend to be less disruptive of existing activities than other forms of rail systems.

However, it is possible that development spurred by streetcar lines is merely shifted from other parts of the urban area. This is a concern in analyzing the effects of rail transit in general,[6] but there is little empirical research on this question for streetcars specifically.[7] In addition to the expense of the streetcar itself, development along streetcar lines has sometimes benefited from other subsidies. Not all streetcar lines have succeeded in stimulating property development.

The city planning literature suggests that if a streetcar is to spur development, the host locality needs to at least provide supportive land use laws, such as permitting higher-density, mixed-use developments along a corridor. One study found that government support in the form of such things as incentives, zoning changes, and marketing is the leading factor determining whether or not development occurs around investment in public transportation.[8] The same study found that both light rail transit, including streetcars, and bus rapid transit (BRT) led to development, but that BRT leveraged much more private investment per dollar of transit expenditure.

Are Streetcars Cost-Effective?

Streetcar systems can be much less costly to build than light rail systems, and may be particularly attractive in small and medium-size cities where a larger and more expensive rail system is not appropriate.[9] Capital costs per mile can vary dramatically, however, depending on the specific circumstances of projects, including the need for major new infrastructure. A study of 21 light

[4] Shelley Poticha and Gloria Ohland, "Why Streetcars and Why Now?," and David Taylor, "Place Making and People Moving," in *Street Smart: Streetcars and Cities in the Twenty-First Century*, ed. Shelley Poticha and Gloria Ohland, Oakland, CA, Reconnecting America, 2006.

[5] Central Arkansas Transit Authority, "Economic Enhancement Study, Development Along the River Rail Streetcar System, 2000-2012," http://www.cat.org/wp-content/uploads/2013/05/River-Rail-Economic-Enhancement-Study.pdf.

[6] U.S. Department of Transportation, Federal Transit Administration, Measuring the Economic Development Benefits of Transit Projects: Proceedings of an Expert Panel Workshop, Washington, DC, March 2008, pp. 10-11, http://www.fta.dot.gov/documents/Econ_Dev_Expert_Panel_Report.pdf.

[7] Ron Golem and Janet Smith-Heimer, *Relationships between Streetcars and the Built Environment: A Synthesis of Transit Practice*, Transit Cooperative Research Program, Synthesis 86, Transportation Research Board, Washington, DC, 2010, http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_syn_86.pdf.

[8] Walter Hook, Stephanie Lotshaw, and Annie Weinstock, *More Development For Your Transit Dollar: An Analysis of 21 North American Transit Corridors*, Institute for Transportation and Development Policy, 2013, https://go.itdp.org/display/live/More+Development+for+Your+Transit+Dollar%3A+An+Analysis+of+21+North+American+Transit+Corridors.

[9] David Taylor, "Place Making and People Moving," in Street Smart: Streetcars and Cities in the Twenty-First Century, ed. Shelley Poticha and Gloria Ohland, Oakland, CA, Reconnecting America, 2006.

rail, streetcar, and BRT lines found that streetcars were middling in terms of capital cost per mile.[10] While the 21 projects ranged from below $10 million per mile to over $80 million per mile, the two streetcar projects analyzed, Portland, OR, and Seattle, cost about $30 million per mile and $60 million per mile to build, respectively (in 2010 dollars). Although conventional buses do not provide some of the advantages of BRT and rail transit, including streetcars, regular bus service improvements are likely to be the least costly of all measures to increase transit capacity.

Operating costs, including such things as drivers' salaries, fuel, and track and vehicle maintenance, are difficult to compare among modes because of differing service characteristics. A Government Accountability Office (GAO) analysis of operational costs, for example, showed no consistent advantage for BRT or light rail.[11] A comparison of operating costs of streetcar and bus service in seven cities found that costs per trip were higher for streetcars in only two cities. But measured by cost per passenger mile, streetcar operating costs were significantly higher than bus operating costs.[12]

What Sources of Federal Funding Are Available to Build Streetcars?

There are currently three main sources of funding available for the construction of streetcar systems: (1) the TIGER grant program; (2) the New Starts and Small Starts program; and (3) flexible federal-aid highway program funds, including funding from the Surface Transportation Program and the Congestion Mitigation and Air Quality Improvement (CMAQ) program.

TIGER Grants

The predominant form of federal support for the construction of streetcars over the past few years has been the Transportation Investment Generating Economic Recovery (TIGER) program.[13] This is likely because TIGER provides moderate sums of discretionary funding, streetcars are favored by the Obama Administration as so-called "livability" projects,[14] and, until passage of the Moving Ahead for Progress in the 21st Century Act (MAP-21; P.L. 112-141) in 2012, streetcar projects did not score well in the evaluation of projects funded by the New Starts and Small Starts program.

Initially enacted as part of the American Recovery and Reinvestment Act (ARRA; P.L. 111-5), the TIGER program has been funded in five subsequent appropriations bills. TIGER funding was $1.5 billion in FY2009, $600 million in FY2010, $527 million in FY2011, $500 million in FY2012, $474 million in FY2013, and $600 million in FY2014.[15] Funds are drawn from the

[10] Hook, Lotshaw, and Weinstock, 2013, p. 19.

[11] U.S. General Accounting Office (now the Government Accountability Office), *Bus Rapid Transit Shows Promise*, GAO-01-984, Washington, DC, September 2001, http://www.gao.gov/new.items/d01984.pdf.

[12] Jeffrey Brown, "The Modern Streetcar in the U.S.: An Examination of Its Ridership, Performance, and Function as Public Transportation Mode," *Journal of Public Transportation*, Vol. 16, No.4, 2013, pp. 43-61, http://www.nctr.usf.edu/wp-content/uploads/2013/12/jpt16.4_Brown.pdf. The seven cities analyzed were Little Rock, Memphis, New Orleans, Portland, Seattle, Tacoma, and Tampa. Data for streetcar operating costs per passenger mile in Portland were unavailable.

[13] The TIGER program is called National Infrastructure Investments in appropriations acts.

[14] See, for example, U.S. Department of Transportation, "TIGER Discretionary Grant Program Livability & Sustainability," http://www.dot.gov/sites/dot.dev/files/docs/TIGER_LIVABILITY_SUSTAINABILITY.pdf.

[15] U.S. Department of Transportation, "FY2013 TIGER Grants, Program Background," http://www.dot.gov/tiger;

general fund of the U.S. Treasury. Nine streetcar projects have been awarded a total of $279 million from the TIGER program (see **Table 1**). To date, FY2014 funding has not been awarded. According to a notice of funding availability, applications for FY2014 funding must be submitted by April 28, 2014.[16]

Table 1. TIGER Grants for Streetcar Projects, FY2009-FY2013

Project	TIGER Funding ($ millions)	Estimated Project Cost[a] ($ millions)	TIGER Funding as Share of Project Costs (%)
TIGER I (FY2009)[b]	**156**	**396**	**39**
Tucson Modern Streetcar, AZ	63	150	42
New Orleans Streetcar, LA	45	45	100
Downtown Dallas Streetcar, TX	23	58	40
M1/Woodward Avenue, Detroit, MI	25	143	17
TIGER II (FY2010)	**74**	**128**	**58**
Atlanta Streetcar, GA	48	72	66
Sugar House Streetcar, Salt Lake City, UT	26	56	47
TIGER III (FY2011)	**11**	**156**	**7**
Cincinnati Streetcar Riverfront Loop, OH	11	156	7
TIGER IV (FY2012)	**18**	**83**	**22**
Fort Lauderdale Wave Streetcar, FL	18	83	22
TIGER V (FY2013)	**20**	**103**	**20**
Kansas City Downtown Streetcar, MO	20	103	20
Total, FY2009-FY2013	**279**	**866**	**32**

Source: U.S. Department of Transportation, TIGER Grant Awards, various years, http://www.dot.gov/tiger.

a. Data are taken from the DOT's award announcement and may not reflect actual project costs or more recent estimates.

b. Does not include $23 million for the SW Moody Street & Streetcar Reconstruction in Portland, OR, which includes building double streetcar tracks as well as three traffic lanes and pedestrian and bicycle facilities.

New Starts and Small Starts Program

The New Starts and Small Starts program provides federal funds to public transportation agencies on a largely competitive basis for the construction of new fixed guideway transit systems and the expansion of existing systems (49 U.S.C. §5309). The New Starts and Small Starts program is one of six major funding programs administered by FTA, accounting for about 18% of FTA's budget. Unlike the other major federal transit programs, which are funded from the mass transit account of the highway trust fund, funding for the New Starts and Small Starts program comes from the general fund of the U.S. Treasury. MAP-21 authorized $1.9 billion for FY2013 and

Consolidated Appropriations Act, 2014 (P.L. 113-76).

[16] U.S. Department of Transportation, "Notice of Funding Availability for the Department of Transportation's National Infrastructure Investments under the Consolidated Appropriations Act, 2014," 79 *Federal Register* 11854-11863, March 3, 2014, http://www.gpo.gov/fdsys/pkg/FR-2014-03-03/pdf/2014-04627.pdf.

FY2014. Funding appropriated for the program was $1.855 billion in FY2013 and $1.943 billion in FY2014. In addition, the FY2014 appropriations act provided $93 million in unobligated funds from the former discretionary bus and bus facilities program for bus rapid transit projects, and an unspecified amount of unobligated funds from the former alternatives analysis program for any type of New Start and Small Start project.

Streetcar projects typically fall into the Small Starts category, defined as projects requesting $75 million or less in federal assistance and costing $250 million or less in total. To go with the smaller amount of federal funds being committed, the approval process for Small Starts projects is simpler than for larger and more expensive New Starts projects.

Few streetcar projects have received New Starts and Small Starts program funding over the past two decades, but changes in the way projects are evaluated by FTA may make it easier in the future. GAO found that of the 57 projects approved for funding under the New Starts and Small Starts program between October 2004 and June 2012, only one was a streetcar project (Portland, OR).[17] This was likely due to the use of cost of time savings as part of the evaluation of projects prior to MAP-21, as that measure tended to favor projects supporting faster long-distance trips, like those on commuter rail, rather than slower, shorter trips like those on streetcars. As required by MAP-21, the cost of time savings measure has now been dropped in favor of cost per rider. In December 2013, two streetcar projects, those in Tempe, AZ, and Ft. Lauderdale, FL, were in the project development phase of the Small Starts process.

In its study, GAO did not include projects receiving less than $25 million in New Starts and Small Starts program funding, which were exempt from the normal New Starts and Small Starts evaluation process. In FY2010, five streetcar projects were awarded $25 million or less. Streetcar projects in Fort Worth, St. Louis, Charlotte, and Cincinnati were awarded $24.99 million each, and Dallas received $4.9 million.[18] These funds distributed by FTA were from $130 million in unallocated New Starts and Small Starts program funds. The Obama Administration decided that it would use them for what it termed "urban circulator" projects, mainly streetcar and bus rapid transit projects. Instead of the New Starts and Small Starts selection criteria, the Urban Circulator grant program evaluated projects based on livability, including providing additional transportation options, sustainability, and economic development.[19]

Flexible Highway Funding

MAP-21 continues to allow certain federal-aid highway funds to be used for public transportation projects at the discretion of state and local officials. Most of the "flexed" funds have come from two programs, the Surface Transportation Program (STP) and the Congestion Mitigation and Air Quality Improvement Program (CMAQ). Several streetcar projects have used or are proposing to use flexed funding. For example, the streetcar project in Tempe, AZ, is proposing to use $32.1 million dollar of CMAQ funding in addition to $56 million from the New Starts and Small Starts program and $41.24 million in local funding.[20]

---

[17] Government Accountability Office, *Public Transit: Funding for New Starts and Small Starts Projects, October 2004 through June 2012*, GAO-13-40, November 2012, http://www.gao.gov/assets/660/650030.pdf.

[18] Federal Transit Administration, "Urban Circulator/Bus and Bus Livability Project Descriptions," http://www.fta.dot.gov/12297_11820.html.

[19] Federal Transit Administration, "Exempt Discretionary Program Grants (Section 5309) for Urban Circulator Systems," 74 *Federal Register* 64989-64994, December 8, 2009, http://www.gpo.gov/fdsys/pkg/FR-2009-12-08/pdf/E9-29245.pdf.

[20] Federal Transit Administration, "New Starts and Small Starts Project Profiles: Tempe Streetcar,"

Can Federal Funds Be Used to Operate Streetcars?

The costs of operating transit service include such functions as vehicle operation and maintenance, maintenance of stations and other facilities, general administration, and purchase of transportation from private operators. In general, federal law prohibits transit operators in urbanized areas of 200,000 or more residents from using federal transit funds for operating expenditures, including annual distributions of federal public transportation funds by formula.[21] Federal support in urbanized areas of this size is limited to capital expenditures. However, the definition of transit capital expenses includes some items traditionally considered to be operating expenses, such as preventive maintenance.

In some circumstances, CMAQ funds can be used to support the operating expenses of streetcars. As the Federal Highway Administration (FHWA) notes, "projects designed to attract new riders, typically by providing new transit facilities or services, are eligible for CMAQ funds ... Projects can include both constructing and operating new facilities."[22] Among other things, CMAQ funds may be used to provide fare subsides. However, FHWA also notes that CMAQ funds typically provide short-term help to launch new or expanded service.

What Are the Main Policy Options for Congress?

Relatively recent changes in federal programs, should they be maintained, are likely to lead to greater support for streetcars in the coming years. These changes include the creation of the TIGER program in FY2009 and its continued funding through FY2014, and reforms to the evaluation of projects in the New Starts and Small Starts program that favor streetcars. Increased funding of these programs may lead to even greater federal support for building new streetcar lines, although this would depend on the competition for funds from other types of projects.

Another way to increase federal support for streetcar construction would be to direct more existing funding to these types of projects. One way for Congress to accomplish this would be to reinstitute the set-aside of New Starts and Small Starts funding for Small Starts projects, those requesting $75 million or less in federal assistance and costing $250 million or less in total. Prior to MAP-21, $200 million of the program's funding was reserved for Small Starts projects. This again would not guarantee the funding of streetcars because Small Starts grants also go to other types of projects, such as BRT, but it would limit the competition for these funds.

Congress might also consider supporting streetcar systems by allowing the use of federal transit funds to pay for operating costs. The federal government generally prohibits the use of federal transit funds for operating expenses in urbanized areas over 200,000. However, small bus operators in these larger urbanized areas were provided support in MAP-21. Operators of small fixed-guideway systems, such as streetcars, might be afforded the same opportunity.

Alternatively, Congress might decide to reduce or eliminate the use of federal funds for streetcar construction and operation. This could be accomplished by reducing or eliminating funding for the TIGER program, the New Starts and Small Starts program, and flexible highway programs, or by prohibiting the use of program funds for streetcars. In the case of the New Starts and Small

http://www.fta.dot.gov/documents/AZ__Tempe_Streetcar_Profile_FY14.pdf.

[21] Urbanized areas are places with populations of 50,000 or more, as determined by the U.S. Census Bureau.

[22] Federal Highway Administration, "CMAQ and Public Transportation," FHWA-HEP-13-010, http://www.fhwa.dot.gov/environment/air_quality/cmaq/reference/cmaq_public_transportation/cmaqpublictransport.pdf.

Starts program it might be easier to reinstitute evaluation criteria that are unfavorable to streetcar projects. This might entail requiring the use of time savings or passenger miles, not passenger trips, as a measure of mobility benefits.

Author Information

William J. Mallett
Specialist in Transportation Policy

Disclaimer